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Education

Ph.D., Statistics, May 2007, Southern Methodist University, Dallas, TX.
M.A., Statistics, December 2002, University of South Florida, Tampa, FL
M.S., Applied Mathematics, July 1997, Sichuan University, Chengdu, China
B.S., Mathematics, July 1993, Changchun Normal University, Changchun, China

Academic Appointments

College of Health Solutions, Arizona State University, Phoenix, AZ
Professor (with tenure), 08/2023 –
Department of Mathematics and Statistics, Florida International University, Miami, FL
Professor (with tenure), 08/2022 –08/2023
Department of Epidemiology and Biostatistics, Indiana University Bloomington, Bloomington, IN
Associate Professor (with tenure), 07/2016 – 07/2022
Assistant Professor, 08/2012 – 06/2016
Center for Clinical and Translational Sciences, University of Texas Health Science Center at Houston, Houston, TX
Assistant Professor, 06/2010 – 07/2012
Department of Epidemiology and Biostatistics, Florida International University, Miami, FL
Assistant Professor, 08/2009 – 05/2010
Joseph Stokes Jr. Research Institute, Children's Hospital of Philadelphia, Philadelphia, PA
Senior Biostatistician, 06/2007 – 05/2009

Publications

Peer-reviewed Journal Articles (Theory and Methodology)

1. Z. Chen (2022) "Robust tests for combining p-values under arbitrary dependency structures". *Scientific Reports*, 12, Article number: 3158.
2. Z. Chen (2022) "Optimal tests for combining p-values". *Applied Sciences*, 12(1), 322.
3. C. Lyu, M. Huang, N. Liu, Z. Chen, P. Lupo, B. Tycko, J. Witte, C. Hobbs, M. Li (2022) "Random field modeling of multi-trait multi-locus association for detecting methylation quantitative trait loci". *Bioinformatics*, 2022; btac443, <https://doi.org/10.1093/bioinformatics/btac443>.
4. Z. Chen, Y. Zang (2021) "A robust statistical test for genetic association accounting for covariates". *Genes*, 12(11), 1723.
5. C. Lyu, M. Huang, N. Liu, Z. Chen, P. Lupo, B. Tycko, J. Witte, C. Hobbs, M. Li (2021) "Detecting methylation quantitative trait loci using a methylation random field method". *Briefings in Bioinformatics* (published on 08/19/2021, <https://doi.org/10.1093/bib/bbab323>)

6. Z. Chen, K. Wang (2019) "Gene-based sequential burden association test". *Statistics in Medicine*, 38 (13), 2353-2363.
7. Z. Chen, Q. Liu, K. Wang (2019) "A novel gene-set association test based on variance-gamma distribution". *Statistical Methods in Medical Research*, 28(9) 2868–2875.
8. Z. Chen, Q. Liu, K. Wang (2019) "A genetic association test through combining two independent tests". *Genomics*, 111(5) 1152-1159.
9. D. Lewinski, Y. Yang, Z. Chen, G. Zhang (2019) "Reversion and location trends in the bitcoin market", *International Journal of Data Science*, 4 (4), 275-287.
10. Z. Chen, Y. Lu, T. Lin, Q. Liu, K. Wang (2018) "Gene-based genetic association test with adaptive optimal weights". *Genetic Epidemiology*, 42:95–103.
11. Y. Lu, Z. Chen, D. Duran (2018) "Comparison of two methods in estimating standard error of the method of simulated moments estimators for generalized linear mixed models". *Communications in Statistics - Simulation and Computation*, 47(10): 2886-2895.
12. Z. Chen, T. Lin, and K. Wang (2017) "A powerful variant-set association test based on chi-square distribution". *Genetics*, 207(3), 903-910.
13. Z. Chen, and K. Wang (2017) "A gene-based test for association through an orthogonal decomposition of genotype scores". *Human Genetics*, 136(10), 1385-1394.
14. Z. Chen, S. Han, and K. Wang (2017) "Genetic association test based on principal component analysis". *Statistical Applications in Genetics and Molecular Biology*, 16(3), 189-198.
15. Z. Chen (2017) "Testing for gene-gene interaction in case-control GWAS". *Statistics and Its Interface*, 10(2) 267–277.
16. Z. Chen, HKT Ng, J. Li, Q. Liu, and H. Huang (2017) "Detecting associated SNPs on the X chromosome in case control genome-wide association studies". *Statistical Methods in Medical Research*, 26(2), 567-582.
17. Z. Chen, H. Huang, P. Qiu (2017) "An improved two-stage procedure to compare two or more hazard curves". *Journal of Statistical Computation and Simulation*, 87(9), 1877-1886.
18. Z. Chen (2017) "A nonparametric approach to detecting the difference of survival medians". *Communications in Statistics - Simulation and Computation*, 46(1), 395-403.
19. Z. Chen, H. Huang, P. Qiu (2016) "Comparison of multiple hazard rate functions". *Biometrics*, 72(1), 39-45.
20. Z. Chen, G. Zhang (2016) "Comparing survival curves based on medians". *BMC Medical Research Methodology*, 16:33
21. Z. Chen, H. Huang, HKT Ng (2016) "Testing for association in case-control genome-wide association studies with shared controls". *Statistical Methods in Medical Research*, 25(2), 954-967.
22. Z. Chen, G. Zhang, J. Li (2015) "Goodness-of-fit test for meta-analysis". *Scientific Reports*, 5, Article number: 16983.
23. H. Huang, Z. Chen (2015) "Bayesian composite quantile regression". *Journal of Statistical Computation and Simulation*, 85(18), 3744-3754.
24. G. Zhang, Z. Chen (2015) "Inferences on correlation coefficients of bivariate log-normal distributions". *Journal of Applied Statistics*, 42(3), 603-613.

25. Q. Liu, Z. Chen (2014) "Improved approaches with calibrated neighboring joint density to steganalysis and seam-carved forgery in JPEG images", *ACM Transactions on Intelligent Systems and Technology (TIST)* 5.4: 1-30.
26. Z. Chen, W. Yang, Q. Liu, J. Yang, J. Li, M. Yang (2014) "A new statistical approach to combining p-values using gamma distribution and its application to genetic data". *BMC Bioinformatics*, 15(17): 1-7.
27. Z. Chen (2014) "Extension of mood's median test for survival data". *Statistics and Probability Letters*, 95, 77-84.
28. Z. Chen, H. Huang, HKT Ng (2014) "An improved robust association test for GWAS with multiple diseases". *Statistics and Probability Letters*, 91, 153-161.
29. Z. Chen (2014) "A new association test based on disease allele selection for case-control genome-wide association studies". *BMC Genomics* 15:358.
30. Z. Chen, H. Huang, Q. Liu (2014) "Detecting differentially methylated loci for multiple treatments based on high-throughput methylation data". *BMC Bioinformatics*, 15(1):142.
31. Z. Chen, S. Nadarajah (2014) "On the optimally weighted z-test for combining probabilities from independent studies". *Computational Statistics and Data Analysis*, 70, 387-394.
32. Z. Chen, HKT Ng, S. Nadarajah (2014) "A note on Cochran test for homogeneity in one-way ANOVA and meta-analysis". *Statistical Papers*, 55(2), 301-310.
33. W. Yang, A. Niemierko, X. Qin, Y. Liu, K. Dunker, Z. Chen, J. Yang, L. Wang, Y. Deng, D. Xu, J. Liu, H. Arabnia, W. Tong, M. Yang (2014) "Identification of genes and pathways involved in kidney renal clear cell carcinoma". *BMC Bioinformatics*, 15(S17), 1-10.
34. Z. Chen (2013) "Association tests through combining p-values for case control genome-wide association studies". *Statistics and Probability Letters*, 83(8), 1854-1862.
35. Z. Chen, H. Huang, J. Liu, HKT Ng, S. Nadarajah, X. Huang, Y. Deng (2013) "Detecting differentially methylated loci for illumina array methylation data based on human ovarian cancer data". *BMC Medical Genomics*, 6(S1): S9.
36. H. Huang, Z. Chen, X. Huang (2013) "Age-adjusted nonparametric detection of differential dna methylation with case-control designs". *BMC Bioinformatics*, 14:86
37. Q. Liu, P. Cooper, L. Chen, H. Cho, Z. Chen, M. Qiao, Y. Su, M. Wei, A. Sung (2013) "Detection of JPEG double compression and identification of smartphone image source and post-capture manipulation". *Applied Intelligence*, 39 (4), 705-726.
38. B. Hu, G. Jiang, C. Pang, S. Wang, Q. Liu, Z. Chen, C. Vanderburg, J. Rogers, Y. Deng, X. Huang (2013) "Assessment of gene order computing methods for alzheimer's disease". *BMC Medical Genomics*, 6(S1):S8.
39. Z. Chen, Q. Liu, S. Nadarajah (2012) "A new statistical approach to detecting differentially methylated loci for case control illumina array methylation data". *Bioinformatics*, 28(8), 1109-1113.
40. Z. Chen, H. Huang, HKT Ng (2012) "Design and analysis of multiple diseases GWAS without controls". *Gene*, 510(1), 87-92.
41. Z. Chen, HKT Ng (2012) "A robust method for testing association in genome-wide association studies". *Human Heredity*, 73, 26-34.
42. Q. Liu, X. Li, L. Chen, H. Cho, P. Cooper, Z. Chen, M. Qiao, A. Sung (2012) "Identification of smartphone-image source and manipulation". *Lecture Notes in Computer Science*, Volume 7345, 262-

271.

43. M. Rahbar, Z. Chen, S. Jeon, J. Gardiner, J. Ning (2012) "A nonparametric test for equality of survival medians." *Statistics in Medicine*, 31(9), 844–854.
44. Z. Chen (2011) "A new association test based on chi-square partition for case-control GWA studies". *Genetic Epidemiology*, 35(7), 658–663.
45. Z. Chen, Q. Liu (2011) "A new approach to account for the correlations among SNPs in genome-wide association studies". *Human Heredity*, 72(1), 1-9.
46. Z. Chen, J. Liu, HKT Ng, S. Nadarajah, H. Kaufman, J. Yang, Y. Deng (2011) "Statistical methods on detecting differentially expressed genes for RNA-seq data". *BMC Systems Biology*, 2011, 5(S3): S1.
47. Z. Chen, Q. Liu, M. McGee, M. Kong, X. Huang, Y. Deng, R. Scheuermann (2011) "A gene selection method for Genechip array data with small sample sizes". *BMC Genomics*, 12(S5): S7.
48. Z. Chen (2011) "Is the weighted z-test the best method for combining probabilities from independent tests?" *Journal of Evolutionary Biology*, 24(4), 926-930.
49. Q. Liu, A. Sung, Z. Chen, J. Liu, L. Chen, M. Qiao, Z. Wang, X. Huang, Y. Deng (2011) "Gene selection and classification for cancer microarray data based on machine learning and similarity measures". *BMC Genomics*, 12 (5), 1-12.
50. Z. Chen, M. McGee, Q. Liu, M. Kong, X. Huang, J. Yang, R. Scheuermann (2010) "Identifying differentially expressed genes based on probe level data for Genechip arrays". *International Journal of Computational Biology and Drug Design*, 3(3), 237-257.
51. Q. Liu, A. Sung, M. Qiao, Z. Chen, B. Ribeiro (2010) "An Improved approach for steganalysis of JPEG images". *Information Sciences*, 180 (9), 1643-1655.
52. Z. Chen, M. McGee, Q. Liu, M. Kong, Y. Deng, R. Scheuermann (2009) "A distribution-free convolution model for background correction of oligonucleotide microarray data". *BMC Genomics*, 10(S1): S19.
53. Q. Liu, A. Sung, Z. Chen, J. Liu, X. Huang, Y. Deng (2009) "Feature selection and classification of MAQC-II breast cancer and multiple myeloma microarray gene expression data". *Plos One*, 4(12): e8250.
54. W. Kong, X. Mou, Q. Liu, Z. Chen, C. Vanderburg, J. Rogers, X. Huang (2009) "Independent component analysis of alzheimer's DNA microarray gene expression data". *Molecular Neurodegeneration*, 4(1):5.
55. Q. Liu, A. Sung, M. Qiao, Z. Chen, J. Yang, M. Yang, X. Huang, Y. Deng (2009) "Comparison of feature selection and classification for MALDI-MS data". *BMC Genomics*, 10 (S1): S3.
56. Z. Chen, M. McGee (2008) "A bayesian approach to zero-numerator problems using hierarchical models". *Journal of Data Science*, 6(2), 261-268.
57. Q. Liu, A. Sung, Z. Chen, J. Xu (2008) "Feature mining and pattern classification for steganalysis of LSB matching steganography in grayscale images". *Pattern Recognition*, 44(1), 56-66.
58. Q. Liu, A. Sung, B. Ribeiro, M. Wei, Z. Chen, J. Xu (2008) "Image complexity and feature mining for steganalysis of least significant bit matching steganography". *Information Sciences*, 178(1), 21-36.
59. Q. Liu, J. Yang, Z. Chen, M. Yang, A. Sung, X. Huang (2008) "Supervised-learning based tagSNP selection for genome-wide disease classifications". *BMC Genomics*, 9 (S1): S6.
60. Z. Chen, M. McGee, Q. Liu, R. Scheuermann (2007) "A distribution free summarization method for affymetrix genechip® arrays". *Bioinformatics*, 23(3), 321-327.

61. M. McGee, Z. Chen (2006) "Parameter estimation for the convolution model for background correction of affymetrix genechip® data". *Statistical Applications in Genetics and Molecular Biology*, 5(1),1-27.

Peer-reviewed Journal Articles (Statistical Application)

62. Z. Wang, L. Phillips, T. Rohan, G. Ho, A. Shadyab, A. Bidulescu, C. Rudick, K. Pan, Z. Chen, J. Luo "Diabetes, metformin use, and risk of non-Hodgkin's lymphoma in postmenopausal women: a prospective cohort analysis in the women's health initiative". *International Journal of Cancer*, 152 (8), 1556-1569.
63. S. Cole, Z. Wang, Z. Chen, C. Hua, Y. Chen, D. Evans "Is spending-nights-away-from-home associated with participation and life satisfaction after spinal cord injury? A longitudinal perspective". *Topics in Spinal Cord Injury Rehabilitation* (2023).
64. M. Huibregtse, S. Sweeney, M. Stephens, H. Cheng, Z. Chen, H. Block, S. Newman, K. Kawata "Association between serum NFL and GFAP levels and head impact burden in women's collegiate water polo". *Journal of Neurotrauma*, 40(11-12), 1130-1143.
65. R. Li, Z. Chen "Validation and comparison of two dietary indexes for predicting nonalcoholic fatty liver disease among US adults". *The Journal of Nutrition*, 152 (12), 2865-2876.
66. Z. Wang, J. Luo, Y. Zhang, P. Xun, Z. Chen "Metformin and thyroid carcinoma incidence and prognosis: a systematic review and meta-analysis". *Plos One* 17, no. 7 (2022): e0271038.
67. Z. Wang, R. Arthur, A. Shadyab, N. Saquib, K. Johnson, L. Snetselaar, L. Mu, Z. Chen, J. Luo "Association of tea-drinking habits with the risk of non-hodgkin's lymphoma -- a prospective cohort study among US postmenopausal women". *British Journal of Nutrition*, 129(9), 1543-1551.
68. Z. Wang, A. Shadyab, R. Arthur, N. Saquib, L. Snetselaar, K. Johnson, L. Mu, Z. Chen, J. Luo (2021) "No association observed between coffee intake and risk of non-Hodgkin's lymphoma among postmenopausal women". *Journal of the Academy of Nutrition and Dietetics*, 122 (9), 1725-1736.
69. S. Coon, Z. Bevilacqua, M. Ferris, Z. Chen, K. Kawata (2021) "Caution in clinical interpretation of near point of convergence: influence of time of day on ocular-motor function". *Athletic Training and Sports Health Care*, 13(1):7-10.
70. M. Nowak, Z. Bevilacqua, K. Ejima, M. Huibregtse, Z. Chen, T. Mickleborough, S. Newman, K. Kawata (2020) "Neuro-ophthalmologic response to repetitive subconcussive head impacts: a randomized controlled trial". *JAMA Ophthalmology*, 138(4): 350-357.
71. K. Kawata, J. Steinfeldt, M. Huibregtse, M. K Nowak, J. Macy, K. Kercher, D. Rettke, A. Shin, Z. Chen, K. Ejima, S. Newman, H. Cheng (2020) "Association between proteomic blood biomarkers and DTI/NODDI metrics in adolescent football players: A pilot study". *Frontiers in Neurology*, 11: 581781.
72. M. Huibregtse, K. Ejima, Z. Chen, R. Kalbfell, A. Koppineni, K. Kawata (2020) "Acute time-course changes in CCL11, CCL2, and IL-10 levels after controlled subconcussive head impacts: a pilot randomized clinical trial". *The Journal of Head Trauma Rehabilitation*, 35(5): 308-316.
73. J. Arnaez, A. Krendl, B. McCormick, Z. Chen, A. Chomistek (2020) "The association of depression stigma with barriers to seeking mental health care: a cross-sectional analysis". *Journal of Mental Health*, 29(2):182-190.
74. A. Holmes, Z. Chen, L. Yahng, D. Fletcher, K. Kawata (2020) "Return to learn: academic effects of concussion in high school and college student-athletes". *Frontiers in Pediatrics*, 8: 57.

75. K. Hu, S. Wang, Z. Wang, L. Li, Z. Huang, W. Yu, Z. Chen, Q. Wu (2019) "Clinicopathologic risk factors for gastric cancer: a retrospective cohort study in China", *BMJ Open*, 9(9): e030639.
76. Z. Bevilacqua, M. Kerby, D. Fletcher, Z. Chen, R. Merritt, M. Huibregste, K. Kawata (2019) "Preliminary evidence-based recommendations for return to learn: a novel pilot study tracking concussion recovery in college students". *Concussion*, 4(2), CNC63.
77. A. Wirsching, Z. Chen, Z. Bevilacqua, M. Huibregtse, K. Kawata (2019) "Association of acute increase in plasma neurofilament light with repetitive subconcussive head impacts: a pilot randomized control trial". *Journal of Neurotrauma*, 36(4), 548-553.
78. E. Kwon, D. Seo, H. Lin, Z. Chen (2018) "Predictors of youth e-cigarette use susceptibility in a U.S. nationally representative sample". *Addictive Behaviors*, 82: 79-85.
79. S. Chittiboyina, Z. Chen, E. Chiorean, L. Kamendulis, B. Hocevar (2018) "The role of the folate pathway in pancreatic cancer risk". *Plos One*, 13(2): e0193298.
80. T. Lin, T. Liu, Y. Lin, C. Zhang, L. Yan, Z. Chen, Z. He, J. Wang (2017) "Serum levels of chemical elements in esophageal squamous cell carcinoma in Anyang, China—a case-control study based on machine learning methods". *BMJ Open*, 7(9):e015443.
81. T. Lin, T. Liu, Y. Lin, L. Yan, Z. Chen, J. Wang (2017) "Comparative study on serum levels of macro and trace elements in schizophrenia based on supervised learning methods". *Journal of Trace Elements in Medicine and Biology*, 43, 202-208.
82. E. Dragan, Z. Chen, and W. Ondo (2015) "Does idiopathic restless legs syndrome delay onset and reduce severity of parkinson's disease: a pilot study". *International Journal of Neuroscience*, 125(7), 526–530.
83. N. Sangha, K. Albright, H. Peng, F. Vahidy, A. Boehme, Z. Chen, and S. Savitz (2014) "Misdiagnosis of cerebellar infarctions". *Canadian Journal of Neurological Sciences*, 41(5), 568-571.
84. T. Wu, C. Sitton, A. Potter, R. Bowry, P. Sahota, C. Cai, P. Hui, Z. Chen, N. Gonzales, A. Barreto, G. Lopez, J. Grotta, S. Savitz (2014) "CTP infarct core may predict poor outcome in stroke patients treated with iv t-pa". *Journal of the Neurological Sciences*, 340 (1-2), 165-169.
85. B. M Reininger, M. Rahbar, M. Lee, Z. Chen, S. Alam, J. Pope, B. Adams (2013) "Social capital and disaster preparedness among low income mexican americans in a disaster prone area". *Social Science & Medicine*, 83, 50-60.
86. D. Cattano, P. Killoran, D. Iannucci, V. Maddukuri, A. Altamirano, S. Sridhar, C. Seitan, Z. Chen, C. Hagberg (2013) "Anticipation of the difficult airway: preoperative airway assessment, an educational and quality improvement tool". *The British Journal of Anaesthesia*, 111(2), 276-285.
87. D. Cattano, A. Altamirano, H. Kaynak, C. Seitan, R. Paniccia, Z. Chen, H. Huang, D. Prisco, C. Hagberg, E. Pivalizza (2013) "Perioperative assessment of platelet function by Thromboelastograph® Platelet Mapping™ in cardiovascular patients undergoing non-cardiac surgery". *Journal of Thrombosis and Thrombolysis*, 35(1), 23-30.
88. B. Reininger, S. Raja, A. Carrasco, Z. Chen, B. Adams, J. McCormick, M. Rahbar (2013) "Intention to comply with mandatory hurricane evacuation orders among persons living along a Coastal area". *Disaster Medicine and Public Health Preparedness*, 7(1), 46-54.

89. A. Azizzadeh, K. Charlton-Ouw, Z. Chen, M. Rahbar, A. Estrera, H. Amer, S. Coogan, H. Safi (2013) "An outcome analysis of endovascular vs. open repair of blunt traumatic aortic injuries". *Journal of Vascular Surgery*, 57(1), 108-115.
90. M. Rahbar, M. Samms-Vaughan, K. Loveland, M. Ardjomand-Hessabi, Z. Chen, J. Bressler, S. Shakespeare-Pellington, M. Grove, K. Bloom, D. Pearson, G. Lalor, E. Boerwinkle (2013) "Seafood consumption and blood mercury concentrations in Jamaican children with and without autism spectrum disorders". *Neurotoxicity Research*, 23 (1), 22-38.
91. M. Rahbar, M. Samms-Vaughan, K. Loveland, D. Pearson, J. Bressler, Z. Chen, M. Ardjomand-Hessabi, S. Shakespeare-Pellington, M. Grove, C. Beecher, K. Bloom, E. Boerwinkle (2012) "Maternal and paternal age are jointly associated with autism spectrum disorders in Jamaican children". *Journal of Autism and Developmental Disorders*, 42, 1928–1938.
92. F. Gomez-Rivera, D. Cattano, U. Ramaswamy, C. Patel, A. Altamirano, L. Man, A. Luong, Z. Chen, M. Citardi, S. Fakhri (2012) "Pilot study comparing total intravenous anesthesia to inhalational anesthesia in endoscopic sinus surgery: novel approach of blood flow quantification". *Annals of Otolaryngology, Rhinology & Laryngology*, 121(11), 725-732.
93. N. Mangalat, Y. Liu, N. Fatheree, M. Ferris, M. Arsdall, Z. Chen, M. Rahbar, W. Gleason, J. Norori, D. Tran, M. Rhoads (2012) "Safety and tolerability of lactobacillus reuteri dsm 17938 and effects on biomarkers in healthy adults: results from a randomized masked trial". *Plos One*, 7(9): e43910.
94. M. Rahbar, M. Samms-Vaughan, M. Ardjomand-Hessabi, K. Loveland, A. Dickerson, Z. Chen, J. Bressler, S. Shakespeare-Pellington, M. Grove, K. Bloom, J. Wirth, D. Pearson, E. Boerwinkle (2012) "The role of drinking water sources, consumption of vegetables and seafood in relation to blood arsenic concentrations of Jamaican children with and without Autism Spectrum Disorders". *Science of the Total Environment*, 433(1), 362–370.
95. A. Barreto, A. Alexandrov, P. Lyden, J. Lee, S. Martin-Schild, L. Shen, T. Wu, A. Sisson, R. Pandurengan, Z. Chen, M. Rahbar, C. Balucani, K. Barlinn, R. Sugg, Z. Garami, G. Tsvigoulis, N. Gonzales, S. Savitz, R. Mikulik, A. Demchuk, J. Grotta (2012) "The argatroban and tissue-type plasminogen activator stroke study final results of a pilot safety study". *Stroke*, 43, 770-775.
96. B. Reininger, A. Pérez, M. Flores, Z. Chen, M. Rahbar (2012) "Perceptions of social support, empowerment and youth risk behaviors". *Journal of Primary Prevention*, 33(1), 33-46.
97. A. Shah, J. Valdes, K. M Charlton-Ouw, Z. Chen, S. Coogan, H. Amer, A. Estrera, H. Safi, A. Azizzadeh (2012) "Endovascular treatment of hemodialysis access pseudoaneurysms". *Journal of Vascular Surgery*, 55(4), 1058–1062.
98. A. Codlin, S. Khowaja, Z. Chen, M. Rahbar, E. Qadeer, I. Ara, J. McCormick, S. Fisher-Hoch, A. Khan (2011) "Gender differences in tuberculosis notification in Pakistan". *American Journal of Tropical Medicine and Hygiene*, 85(3), 514-517.
99. T. Bryant-Stephens, C. Kurian, Z. Chen (2011) "Brief report of a low-cost street-corner methodology used to assess inner-city residents' awareness and knowledge about asthma". *Journal of Urban Health*, 88(1), 156-163.
100. B. Kamath, P. Munoz, N. Bab, A. Baker, Z. Chen, N. Spinner, D. Piccoli (2010) "A longitudinal study to identify laboratory predictors of liver disease outcome in alagille syndrome". *Journal of Pediatric Gastroenterology and Nutrition*, 50(5), 526-530.

101. N. Balamuth, A. Wood, Q. Wang, J. Jagannathan, P. Mayes, Z. Zhang, Z. Chen, E. Rappaport, J. Courtright, B. Pawel, B. Weber, R. Wooster, E. O Sekyere, G. Marshall, J. Maris (2010) "Serial transcriptome analysis and cross-species integration identifies centromere-associated protein e as a novel neuroblastoma target". *Cancer Research*, 70(7), 2749–58.
102. M. Falk, J. Rosenjack, E. Polyak, W. Suthammarak, Z. Chen, P. Morgan, M. Sedensky (2009) "Subcomplex il specifically controls integrated mitochondrial functions in caenorhabditis elegans". *Plos One*, 4(8): e6607.

Book Chapter

103. Q. Liu, A. Sung, Z. Chen, L. Chen (2015) "Exposing image tampering with the same quantization matrix". Book Chapter in the book *Multimedia Data Mining and Analytics*, edited by Aaron K. Baughman, Jiang Gao, Jia-Yu Pan, Valery A. Petrushin, Springer, pages 327-343. ISBN 978-3-319-14997-4.
104. Q. Liu, A. Sung, M. Qiao, B. Ribeiro, Z. Chen (2011), "Feature mining and pattern recognition in multimedia forensics". Book Chapter in the book *Pattern Recognition, Machine Intelligence and Biometrics*, edited by PSP Wang, High Education Press and Springer, pages 561-604. ISBN 978-3-642-22406-5.

Editorial/Commentary/Letter to the Editor

105. M. Yang, K. Yoshigoe, W. Yang, X. Qin, A. Dunker, Z. Chen, H. Arbania, J. Liu, A. Niemierko, J. Yang (2014) "The emerging genomics and systems biology research lead to systems genomics studies". *BMC Genomics* 15(11):1-4.
106. J. Yang, A. Dunker, J. Liu, A. Niemierko, W. Yang, X. Qin, H. Arbania, Z. Chen, L. Wang, Y. Liu, M. Yang, D. Xu, Y. Deng, W. Tong (2014) "Advances in translational bioinformatics facilitate the revealing landscape of complex disease mechanisms". *BMC Bioinformatics*, 15: 11.
107. Z. Chen (2012) "Improved survival after hemostatic resuscitation". *Journal of Trauma and Acute Care Surgery*. 72(1), 313.
108. M. Hossain, Z. Chen (2012) "Comments on 'Application of an adaptive design to a randomized phase II selection trial in gastric cancer: a report of the study design' by Satoshi Morita and Junichi Sakamoto". *Pharmaceutical Statistics*, 11, 267–268.
109. J. Higgins, S. Laing, Z. Chen (2011) "Media reporting bias affects reported sudden death rates". *Journal of the American College of Cardiology*, 58, 990-991.
110. Z. Chen, S. Nadarajah (2011) "Comments on 'choosing an optimal method to combine p-values' by Sungho Won, Nathan Morris, Qing Lu and Robert C. Elston". *Statistics in Medicine*, 30(24), 2959–2961.

Conference Proceedings

111. Q. Liu, Z. Chen, and C. Liu (2022) "A Comparison Study to Detect COVID-19 Chest X-Ray Images with SOTA Deep Learning Models." *Proceedings of the 1st Workshop on Healthcare AI and COVID-19*, 146-153, ICML 2022.
112. Q. Liu, A. Sung, L. Chen, M. Yang, Y. Liu, Z. Chen, J. Zhang (2015) "A method to detect AAC audio forgery". *Proceedings of the 8th International Conference on Mobile Multimedia Communications*, 198-204.
113. W. Yang, K. Yoshigoe, A. Niemierko, J. Yang, X. Qin, Y. Liu, J. Liu, Z. Chen, A. Dunker, L. Wang, Y. Deng, D. Xu, W. Tong, H. Arabnia, M. Yang (2014) "Exploring big-data analysis using integrative

systems biology approaches for kidney renal clear cell carcinoma studies". *Proceedings of the International Conference on Advances in Big Data Analytics*, July 2014.

114. Q. Liu, A. Sung, Z. Chen, X. Huang (2011) "A JPEG-based statistically invisible steganography". *ICIMCS '11 Proceedings of the Third International Conference on Internet Multimedia Computing and Service*, 78-81.
115. M. Kong, Z. Chen, Yu Qian, J. Cai, J. Lee, E. Rab, M. McGee, R. Scheuermann (2007) "Use of gene ontology as a tool for assessment of analytical algorithms with real data sets: impact of revised affymetrix CDF annotation". *Proceedings 7th International Workshop on Data Mining in Bioinformatics*, 60-68.
116. Q. Liu, A. Sung, J. Xu, J. Liu, Z. Chen (2006) "Microarray gene expression classification based on supervised learning and similarity measures". *2006 IEEE International Conference on Systems, Man, and Cybernetics*, 5094-5099.
117. S. Nadarajah and Z. Chen (2005) "Skew Logistic Distribution with Financial Applications", *2005 Hawaii International Conference on Statistics, Mathematics and Related Fields*, Honolulu, Hawaii, 717-724.

Research Supports

Ongoing Projects

- 1R03DE030259, NIH-NIDCR, Analyzing nonsyndromic orofacial clefts GWAS data with case-parent trio design, 07/01/2021-06/30/2024, Chen (PI)
- 1R01NS113950, NIN-NINDS, Subconcussive neurodegenerative progression in adolescent athletes 12/2020 – 11/2025, Kawata (PI), My role: Co-I

Completed Projects

- Antecedents, consequences, and interventions for travel participation after SCI, 04/2020-04/2023, Craig H. Neilsen Foundation, Cole (PI), My role: Co-I/biostatistician (03/2022-08/2022).
- A novel neuroimaging biomarker for subconcussive axonal degeneration 03/1/2019- 02/28/2021 Indiana CTSI Pilot Core Facility Funding for Research, Kawata (PI), My role: Co-I.
- Strengthening statistical association tests for GWAS data 05/01/2019 - 04/30/2020, Indiana CTSI, BERD Pilot Grant, Chen (PI).
- Research seed grant award, 05/14/2018 - 04/30/2020, IU Vice President for Research, Kawata (PI), My role: Co-I.
- Protect the player, protect the game: how many subconcussive head impacts are safe? 06/30/2019-07/1/2020, IU Women's Philanthropy Leadership Council: Research Grant, Kawata (PI), My role: Co-I.
- Biochemical and behavioral markers for acute subconcussive head impacts, 06/2017-5/2019, Indiana State Department of Health, Kawata (PI), My role: Co-I.
- Detection of subclinical neural dysfunction following repetitive subconcussive head impacts, 02/2017-01/2018, IU SPH, Kawata (PI), My role: Co-I.
- SMALL: RUI: Novel Detection approaches with comprehensive hybrid intelligent systems for multimedia forensics, 01/01/2014 -12/31/2016, NSF, Liu (PI), My role: Subcontract PI.
- Detecting associated SNPs on the X-chromosome in case control GWAS, 10/01/2012-10/15/2013, IUB SPH, Chen (PI).

- Statistical methods for genome-wide methylation data with multiple conditions, 01/01/2013-12/31/2013, IUB SPH, Chen (PI).
- New meta-analysis methods for genome-wide association studies, 12/2013-12/2014, IUB SPH, Chen (PI).
- 5UL1RR024148-03, Center for Clinical and Translational Sciences (CCTS), 09/30/2006-06/30/2011, NIH/NCRR, McPherson (PI), My role: Biostatistician.
- 5P01AR052915-07, Genetics and ankylosing spondylitis (AS) pathogenesis, 07/01/2012-06/30/2017, NIH, Reveille (PI), My role: Co-I/Bioinformatician.
- P50NS044227-07S3, University of Texas Specialized Program in Acute Stroke, 9/30/2009-2/28/2011 NIH, Grotta (PI), My role: Biostatistician.
- PP110163, Co-Tu Salud ¡Si Cuenta!: Promotora Training and community education for cancer prevention, 08/01/2011 - 07/31/2013, Cancer Prevention and Research Institute of Texas, Reininger (PI), My role: Co-I.
- Transforming Texas in Cameron County, 2011-2016, Texas Department of State Health Services. Reininger (PI), My role: Co-I.
- UTMB/Texas Diabetes Council, 10/01/2009 - 8/31/2011, Texas diabetes council stark model of community, Reininger (PI), My role: Co-I.
- Text messaging for weight loss in primary care patients, 07/01/2012- 06/30/2014, UT Systems Patient Safety Committee, Hwang (PI), My role: Co-I.

Teaching & Advising

Courses Taught

- STA 6244: Data Analysis I (Fall 2022)
- STA 4905: Independent Study (Fall 2022)
- STA 6247: Data Analysis I (Spring 2023)
- STA 3951: Oral Presentations in Statistics (Spring 2023)
- SPH Q-501: Introduction to Statistics in Public Health (Spring 2015, Fall 2015, Spring 2016)
- SPH Q-601: Experimental Analysis and Design (Spring 2014)
- SPH Q-603: Categorical Data Analysis (Spring 2013, Spring 2014, Spring 2015, Spring 2016, Spring 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2021, Spring 2022)
- SPH Q-612: Survival Analysis (Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017, Fall 2019, Fall 2020, Fall 2021)
- SPH 698: Culminating Experience (Fall 2013, Spring 2014, Fall 2014)
- SPH-E792: Independent Research in Epidemiology (Spring 2020)
- SPH-E-799: Dissertation (Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022)

Students Advised

- 2 undergraduate students
- 16 master students
- 17 doctoral students

Services

- Department Steering Committee, 2022-2023

- Department Colloquium Representative, 2022-2023
- MPH Biostatistics Program Coordinator, 2012-2013, 2013-2014, 2014-2015, 2016-2017
- Director of Biostatistics Consulting Center, 2013-2019
- Faculty Search Committee (Assistant/Associate/Full Professor of Biostatistics and Epidemiology), 2012-2013, 2013-2014, 2014-2015, 2015-2016
- Faculty Search Committee for Visiting Clinical Assistant Professor /Lecturer, Department of Epidemiology and Biostatistics, 2015-2016
- Graduate Student Admission Committee, 2012-2013, 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021
- Tenure and Promotion Committee 2016-2017, 2018-2019, 2019-2020, 2021-2022
- Tenure track faculty 3rd Year Review Committee, 2016-2017, 2018-2019
- Wrote epidemiology PhD student qualifying exam questions (two subjects: categorical data analysis, survival data analysis): 2016, 2017, 2018, 2019, 2020, 2021
- Academic Council, 2012-2013, 2013-2014, 2021-2022
- Budgetary/ Budget and Planning Committee, 2012-2013, 2013-2014
- Public Health Leadership Committee, 2012-2013, 2013-2014, 2014-2015, 2016-017
- Research and Creative Activity Committee, 2013-2014, 2014-2015
- Graduate Student Travel Funds Committee, 2013-2014, 2014-2015
- Centers and Institutes Committee, 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019
- Committee on Service, 2015-2016, 2016-2017
- Public Health Alumni Award Selection Committee 2016-2017
- Tenure and Promotion Committee, 2018-2019, 2019-2020
- SPH Research Day Committee, 2019-2020

Honorary Society /Professional Association

- Elected member, Delta Omega Honorary Society in Public Health
- Permanent Member, American Statistical Association
- Permanent Member, International Chinese Statistical Association

Professional Service

- Editorial Board Member, [BMC Genomics](#)
- Editorial Board Member, [Current Bioinformatics](#)
- Editorial Board Member, [Scientific Reports](#)
- Academic Editor, [Plos One](#)
- Guest Editor, [Genes](#)
- Editor-in-Chief, [European Journal of Statistics](#)

Referee for Journals

- American Journal of Human Genetics
- Genome Research
- Nucleic Acid Research
- Briefings in Bioinformatics
- Bioinformatics

- Heredity
- BMC Bioinformatics
- BMC Medical Genomics
- BMC Genomics
- Human Heredity
- Current Bioinformatics
- Frontiers in Genetics
- Gene
- Genetic Epidemiology
- Pathology - Research and Practice
- Journal of Evolutionary Biology
- Science of the Total Environment
- Obesity
- Peptides
- International Journal of Obesity
- Plos One
- BMJ-Open
- Scientific Reports
- Children and Youth Services Review
- The American Journal of the Medical Sciences
- Bulletin of Mathematical Biology
- Computer Methods and Programs in Biomedicine
- Information Science
- Reliability Engineering & System Safety
- Journal of Computational and Applied Mathematics
- Annals of Operations Research
- Open Statistics
- Scandinavian Journal of Statistics
- Australian & New Zealand Journal of Statistics
- Communications in Statistics - Simulation and Computation
- Journal of Applied Statistics
- Journal of Statistical Computation and Simulation
- Journal of Nonparametric Statistics
- Statistics and Probability Letters
- Statistical Papers
- Computational Statistics and Data Analysis
- Statistics in Medicine
- Statistical Methods in Medical Research
- Biometrics
- Journal of the American Statistical Association